POSTER SESSION

1024 Issues in Quality of Care

Sunday, March 17, 2002, 9:00 a.m.-11:00 a.m.
Georgia World Congress Center, Hall G
Presentation Hour: 10:00 a.m.-11:00 a.m.

1024-163 Influence of Poverty on Process of Care and Outcome in Acute Coronary Syndromes

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Background: Observational studies have suggested that low-income patients have higher mortality after MI, attributing this to higher baseline risk or lower access to care. It is unclear whether patient income can affect process of care and/or outcomes within the context of a clinical trial.

Methods: We compared use of catheterization, revascularization, & medical therapy among low-income patients (LI) (annual income < $10,000) versus higher income patients enrolled in the economic substudy of the U.S. PURSUIT trial (n=2207). After controlling for patient clinical risk, we assessed the influence of income on mortality using a previously validated mortality model (c-index=0.81).

Results: Overall 22% of our cohort had income levels < $10,000. LI patients were more likely to be female, older, and have HTN, diabetes, and CHF, & less likely to undergo revascularization. LI patients had higher 30-day and 6-month mortality. These differences in outcome persisted after adjusting for baseline risk, medications, & use of revascularization (Table).

Conclusions: Even in a clinical trial setting where many care processes are standardized, patient socioeconomic status strongly affects short and long-term outcomes. These results indicate that more studies are necessary to identify prognostic factors associated with poverty. Furthermore, initiatives designed specifically to eliminate disparities in health care are needed.

Odds ratios and 95% CI for 30-day and 6-month Mortality

Outcome	Unadjusted OR	Adjusted OR
30-day mortality	2.679 (1.547, 4.638)	1.969 (1.048, 3.699)
6-month mortality	2.079 (1.339, 3.227)	1.552 (0.934, 2.579)

1024-164 The Willingness of Under-Represented Groups to Participate in Clinical Trials

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Background: Women, the elderly, and minorities have been underrepresented in cardiac randomized clinical trials (RCTs). It is unclear whether differences in patients' willingness to consider participating in RCTs explain this low enrollment.

Methods: From 7/00-3/01, we presented 663 CAD patients undergoing catheterization at Duke with options to participate in two hypothetical RCTs: a PCI versus medicine RCT and a CABG versus medicine RCT. Patients rated their willingness to participate in each on a 5-point Likert scale. Multivariable logistic regression was used to determine predictors of affirmative responses ("definitely/probably" participate). Our sample included 35% women; 43% age ≥70; and 22% non-white.

Results: Women were significantly less likely than men to agree to participate in either the PCI (37% vs 47%; p=.02) or CABG RCT (25% vs 37%; p=.002). In contrast, the elderly (≥70 years) and non-whites had similar or higher willingness to consider the PCI and CABG RCTs than their counterparts. Table 1 displays the multivariable OR for agreement to consider participating in a RCT adjusted for age, race, education-level, and other clinical factors.

Conclusion: Despite low historical RCT enrollment, our study suggests that the elderly and minority CAD patients have similar or greater willingness to consider RCT participation as their counterparts. Further investigation is needed to determine the reasons why women are more reluctant than men to participate in cardiac RCTs.

	PCI RCT OR (95% CI)	CABG RCT OR (95% CI)
Women	0.65 (0.47, 0.91)	0.56 (0.39, 0.80)
Age >70	1.31 (0.95, 1.80)	1.30 (0.93, 1.83)
Non-white	1.22 (0.82, 1.60)	0.95 (0.64, 1.44)

1024-165 Implementation of the American College of Cardiology and the American Heart Association's Guidelines for Preoperative Cardiac Risk Assessment in a General Medicine Preoperative Clinic: Improving Efficiency and Preserving Outcomes

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Background: The ACC/AHA guidelines for cardiac assessment of noncardiac surgery were published in 1996 with the intent of promoting evidence based, efficient, preoperative screening and preoperative management in patients having noncardiac surgery. We sought to study the impact of guideline implementation in a general internal medicine preoperative clinic.

Methods: Baseline records of 299 consecutive patients from the preoperative clinic seen prior to guideline publication were reviewed. We compared the care, and the outcomes of these to 339 consecutive patients studied after the guideline was implemented in our clinic. Guideline implementation included a series of grand rounds for faculty, dissemination of a guideline pocket card to faculty and housestaff, creation of a clinic note which emphasized guideline-based decisions, and a monthly case conference with faculty and residents. We examined demographics, type of surgery, preoperative stress test (ETT), preoperative cardiac consults, perioperative B-Blocker therapy, length of stay (LOS) and compared pre-guideline to post-guideline patients.

Result: Age, gender, past medical history were comparable in the two groups. ETT (30.8% Versus 16.2%, P<0.0001) and LOS (6.5 Versus 5.6 days, P= 0.055) were reduced after the guideline implementation. Test appropriateness (86% Versus 94.1%, P=0.0005), and utilization of B-Blocker therapy (15.7% Versus 34.5%, P<0.0001) were increased following the introduction of the guideline. Perioperative MI and cardiac death rates were similarly low in each period (one cardiac death in each).

Conclusion: It is possible to implement the ACC/AHA guidelines for preoperative cardiac risk assessment in a general medicine preoperative clinic by utilizing simple tools used at the point of service as well as sustained educational efforts. The guideline-based approach is more efficient, leads to more appropriate testing, and preserves a low rate of perioperative cardiac complications.

1024-166 Efficacy of Participatory Education as Compared to Clinical Guidelines in Secondary Prevention of Patients With Coronary Artery Disease: A Randomized Study

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Background: To compare efficacy at patient level of a modified Case method intervention with participatory education in secondary prevention of CAD for General Practitioners (GP´s) as compared to conventional clinical guidelines as a method of reducing the gap between evidence based goals and what is presently achieved in clinical practice.

Methods: A prospective randomized controlled trial at Södertälje Hospital and its 14 Primary Health Care Centers (PHCC). Local clinical guidelines were presented to all GP's. PHCC´s were matched into equal pairs with 26 respectively 28 GP's and randomized into intervention (I) respectively control (C).The I group participated in 3-4 recurrent interactive Case seminars at their own PHCC. A locally well-known opinion leader (cardiologist) served as facilitator. 238 consecutive CAD-patients <71 yrs, were included. 186 males/ 52 females, 60±7 yrs, cholesterol 6.4±1.1 and LDL-cholesterol 4.2±1.0 (mmol/l). 209 pts completed the study. Outcome assessment was change in pt lipid levels after two yrs analyzed according to intention-to-treat.

Results: There were no significant differences between I and C concerning demographic factors, lipid levels or functional state at baseline. After two years pts treated by GP's in the I group had their LDL-cholesterol reduced by 9.3±3.5%, while pts treated by GP's in the C group who had only received conventional information and clinical guidelines had no change in their LDL-cholesterol (0.8±2.9%). Pts treated at the specialist clinic had their LDL-cholesterol reduced by 12.4±1.8% during the two years (p=0.0013 ; ANOVA).

Conclusion: Conventional introduction of clinical guidelines had no effect on the GP's behavior as assessed by change in pt cholesterol. This lack of change in control pts was found in spite of the presentation of the results from the 4-S trial at the beginning of the study. Participatory education based on the Case method for GP's resulted in a lipid lowering in their CAD pts quite comparable to what was achieved at a specialist clinic. Thus, we would strongly question the impact on patient outcome of clinical guidelines per se, and advocate complementary methods aimed at attitude and behavioral change of physicians.

1024-167 The Expected Rate of Normal Coronary Arteriograms in the Cardiac Laboratory

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Background: The rate of normal coronary arteriograms(NCA) is an important measure of quality in the Cardiac Catheterization Laboratory (CCL), as noted in the 2001 ACC/SCAI Consensus Statement on CCL Standards. Rates in the literature have varied from 9-36% (av = 21%), in part related to differences in definitions and the pre-test likelihood of disease.

Methods: We examined the clinical and coronary stenosis (CS) findings in patients (pts) who had a diagnostic CA(DCA) for either no chest pain (OCP) or atypical chest pain (ATP) in the ACC/NCDR database of 195,256 pts.

Results: There was no relation between the rates of NCA to hospital volume of DCA (range in r value = 0.027-0.077; p=0.0001). Significant multivariable negative predictors of a NCA were the usual CV risk factors (all p<0.0001; model Chi Sq = 6430; p<0.0001). The only + predictor was OCP or ATP (odds ratio = 2.29, 95% CI =2.16-2.44, p=<0.0001).

Conclusion: This study clearly identifies that the variable rate of NCA in pts undergoing DCA is related to differences in pt mix and the definition of a NCA. It is important that for CCL quality measurement, that comparable pts need to be benchmarked with a standard definition of a "NCA", (i.e. 0% CS vs. <50% CS) and comparing the population of only pts with OCP or ATP who have had DCA. DCA done in hospitals with a higher or lower mix of valvular heart disease, typical or unstable angina, prior CABG and PCI, or recent or remote myocardial infarction will have substantially different rates of NCA.

Observed Rates of %Normal Coronary Arteriogram

Pt Grp	#	0% CS	95% CI p<0.0001	<50% CS	95% CI p=<0.0001
OCP	9896	39.7	38.8-40.6	51.6	50.7-52.5
ATP	11448	54.5	53.6-55.4	69.7	59.8-70.5
Combined	21344	47.6	46.9-48.5	61.3	60.6-62.0